



Masterline[®] Design & Mfg., Inc.

DESIGN SERVICES & PRODUCTS

41580 Production Dr. • Harrison Twp., Michigan 48045 • (586) 463-5888 • Fax (586) 463-8817

Section III

Head Type Shafts

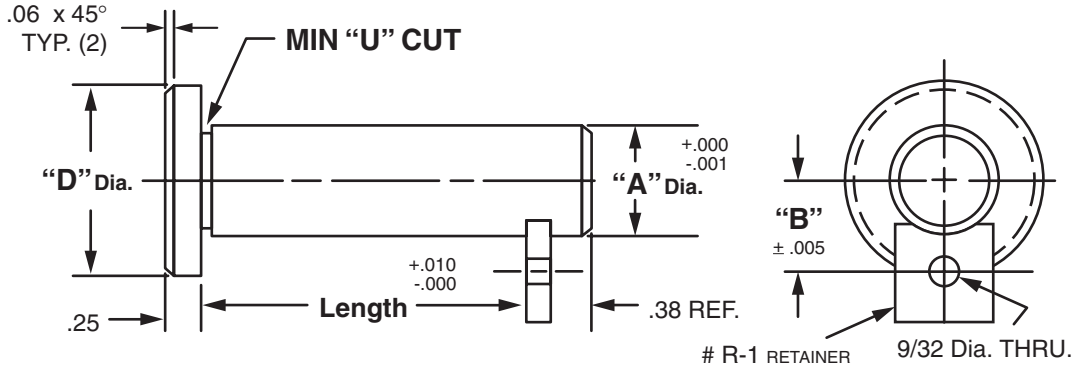


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MASTERLINE HEAD TYPE SHAFT ASSEMBLY WITH RETAINER



"A" Dia.	"D" Dia.	"B" Dim.	Cad File No.
.250	.50	.375	HPZ249
.375	.62	.437	HPZ374
.500	1.00	.500	HPZ499
.625	1.12	.562	HPZ624
.750	1.25	.625	HPZ749
.875	1.38	.688	HPZ874

"A" Dia.	"D" Dia.	"B" Dim.	Cad File No.
1.000	1.50	.750	HPZ999
1.250	1.75	.812	HPZ1124
1.250	1.88	.875	HPZ1249
1.375	2.00	.937	HPZ1374
1.500	2.12	1.000	HPZ1499

Available in four (4) series:

"HPS" – 12L14 CRS

"HPM" – T.G. & P. Alloy, HDN R_C 28-32

"HPH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)

"HPY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer.

Stainless steel retainer provided with series "HPY".

Other retainers are available on request. (see Section VII, page 17 – 20).

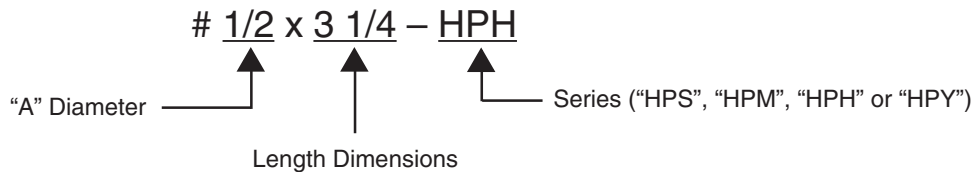
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 3 and Sec. V, page 1 & 4)

Masterline Head Type Shaft Assembly with Retainer

How To Order:



All Parts Available In Inch And Metric.

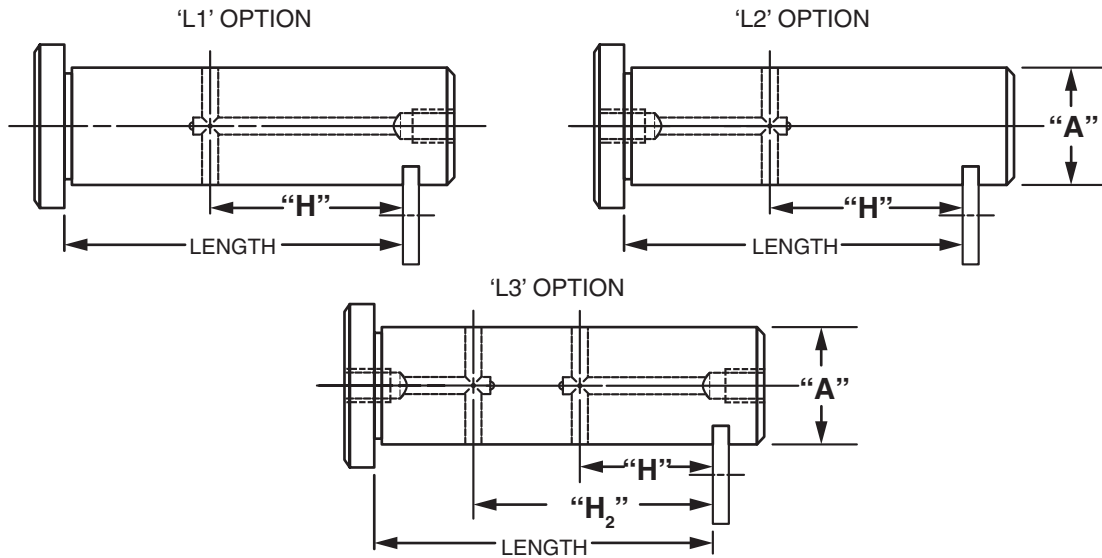


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MASTERLINE HEAD TYPE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

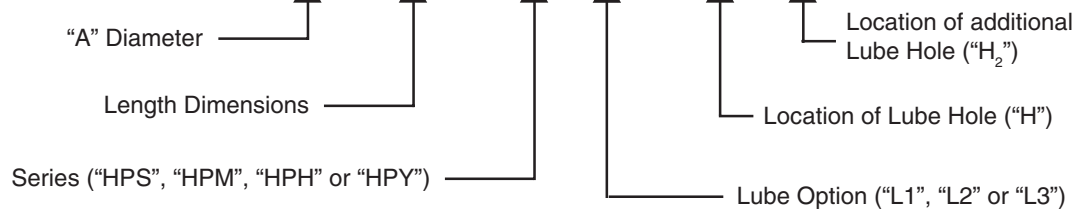
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Head Type Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section III, page 1 for additional ordering information)

How To Order: # 1/2 x 3 1/4 – HPH L1 – 1 5/8 – 2 – Optional Thread



All Parts Available In Inch And Metric.

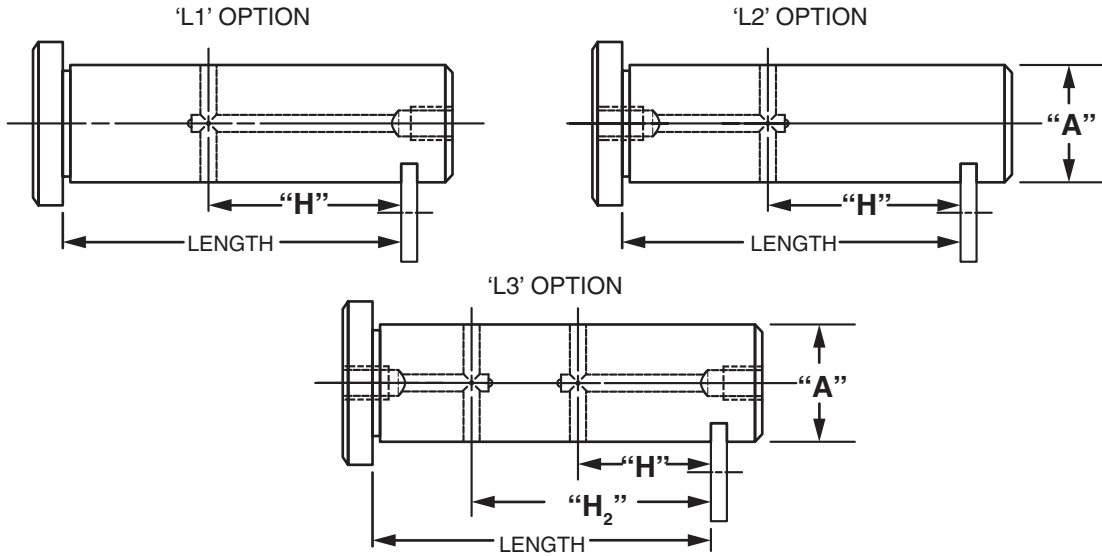


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MASTERLINE METRIC HEAD TYPE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 13M dia. shaft

"L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

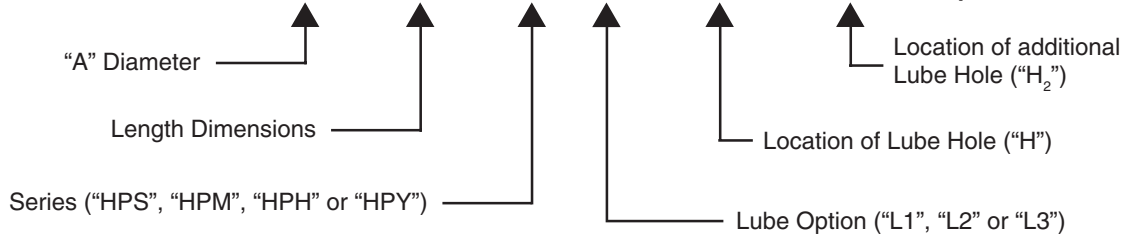
Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Metric Head Type Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section III, page 2 for additional ordering information)

How To Order: # 12M x 75M – HPH L1 – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

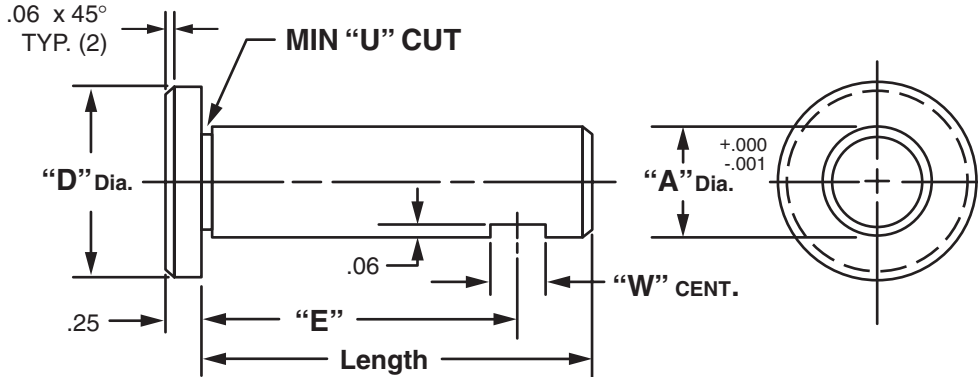


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MASTERLINE HEAD TYPE SET SCREW FLAT SHAFT



"A" Dia.	"D" Dia.	"W" Dim.	Cad File No.
.250	.50	.25	HFZ249
.375	.62	.31	HFZ374
.500	1.00	.31	HFZ499
.625	1.12	.37	HFZ624
.750	1.25	.37	HFZ749
.875	1.38	.50	HFZ874

"A" Dia.	"D" Dia.	"W" Dim.	Cad File No.
1.000	1.50	.50	HFZ999
1.250	1.75	.50	HFZ1124
1.250	1.88	.50	HFZ1249
1.375	2.00	.50	HFZ1374
1.500	2.12	.62	HFZ1499

Available in four (4) series:

- "HFS" – 12L14 CRS
- "HFM" – T.G. & P. Alloy, HDN R_C 28-32
- "HFH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)
- "Hfy" – 304 Stainless Steel

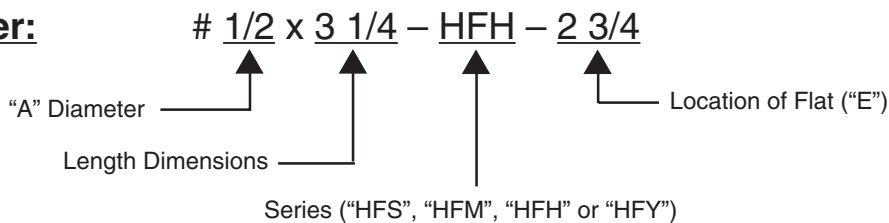
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 7 and Sec. V, page 1 & 4)

Masterline Head Type Set Screw Flat Shaft

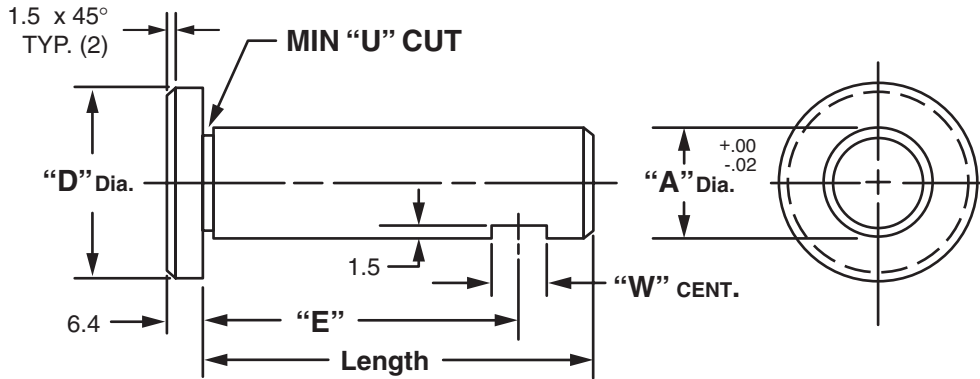
How To Order:



All Parts Available In Inch And Metric.



MASTERLINE METRIC HEAD TYPE SET SCREW FLAT SHAFT



"A" Dia.	"D" Dia.	"W" Dim.	Cad File No.
6M	12.7M	6.3M	HFZ6M
8M	15.8M	6.3M	HFZ8M
12M	25.4M	7.8M	HFZ12M
14M	25.4M	9.5M	HFZ14M
16M	28.4M	9.5M	HFZ16M
18M	31.7M	9.5M	HFZ18M

"A" Dia.	"D" Dia.	"W" Dim.	Cad File No.
20M	31.7M	12.7M	HFZ20M
25M	38.1M	12.7M	HFZ25M
30M	44.4M	12.7M	HFZ30M
35M	50.8M	12.7M	HFZ35M
40M	53.8M	15.9M	HFZ40M

Available in four (4) series:

- "HFS" – 12L14 CRS
- "HFM" – T.G. & P. Alloy, HDN R_c 28-32
- "HFH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.75mm min. case)
- "HFY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

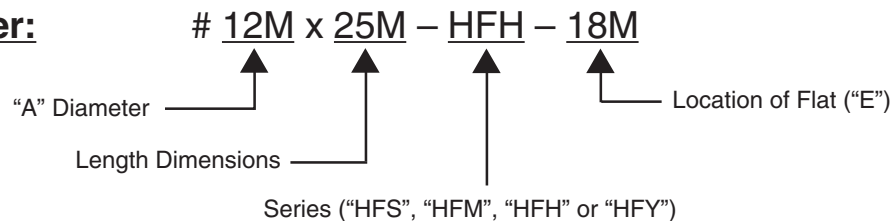
Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 8 and Sec. V, page 1 & 4)

Masterline Metric Head Type Set Screw Flat Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

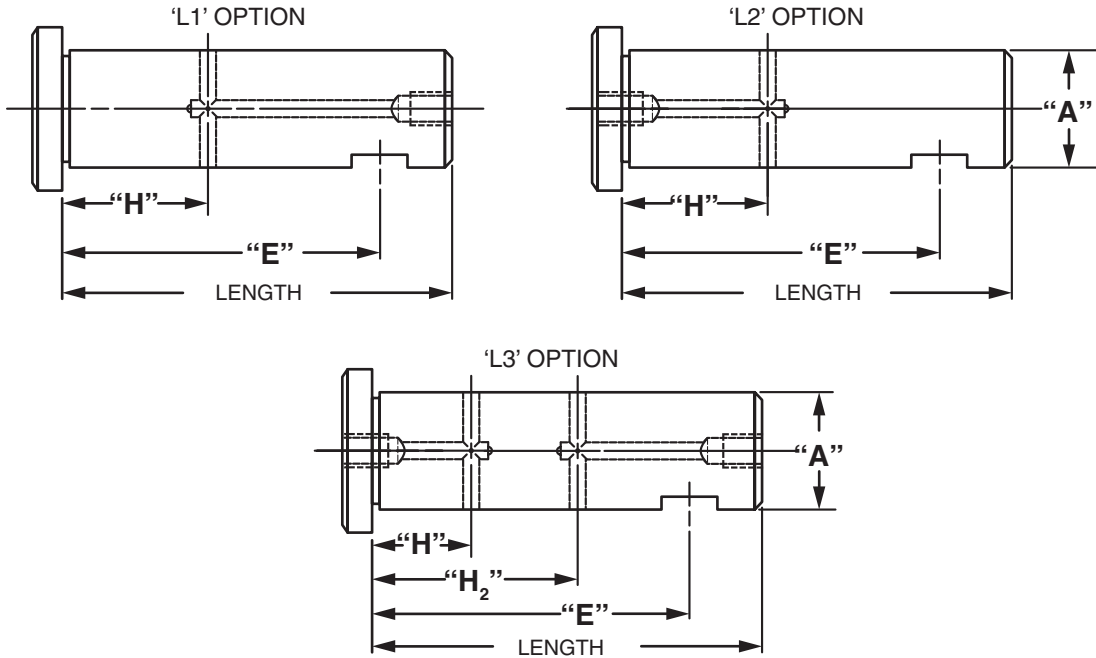


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MASTERLINE HEAD TYPE SET SCREW FLAT SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under shaft head.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

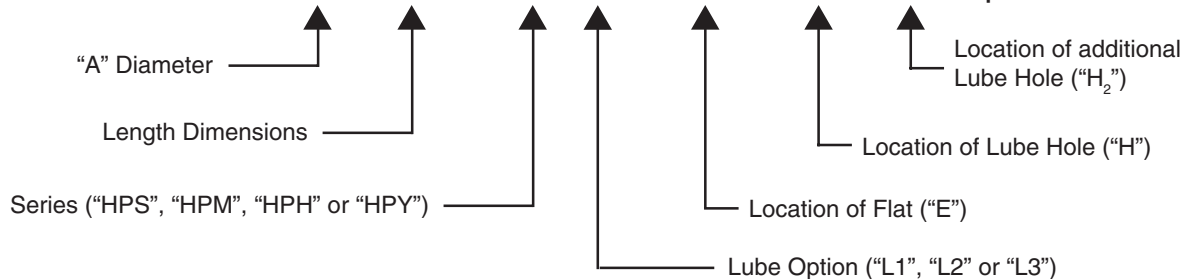
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Head Type Set Screw Flat Shaft with Lube Hole

(Note: Refer to Section III, page 5 for additional ordering information)

How To Order: # 1/2 x 3 1/4 – HPH L1 – 2 3/4 – 1 1/2 – 2 – Optional Thread



All Parts Available In Inch And Metric.

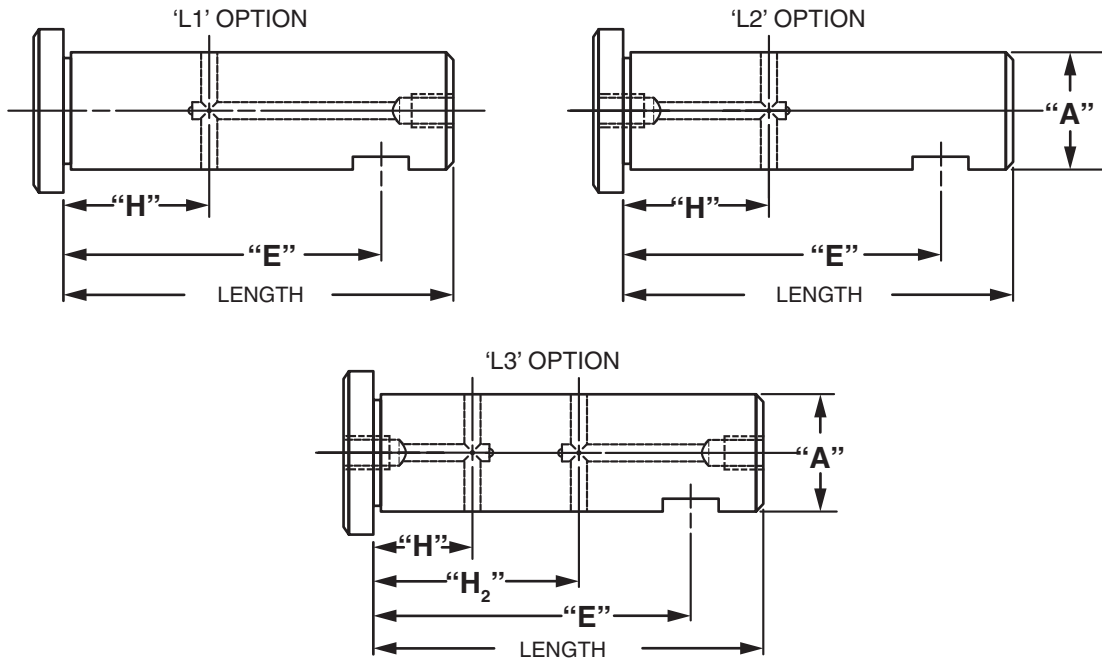


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MASTERLINE METRIC HEAD TYPE SET SCREW FLAT SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under shaft head.

"L1" & "L3" options are not available under 13M dia. shaft

"L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

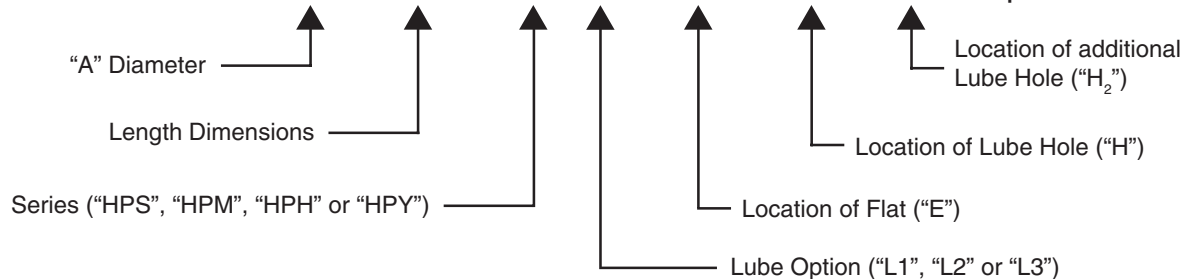
Optional thread for 1/4 – 28 is M6-1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250M or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Metric Head Type Set Screw Flat Shaft with Lube Hole

(Note: Refer to Section III, page 6 for additional ordering information)

How To Order: # 12M x 210M – HPH L1 – 180M – 10M – 35M – Optional Thread



All Parts Available In Inch And Metric.

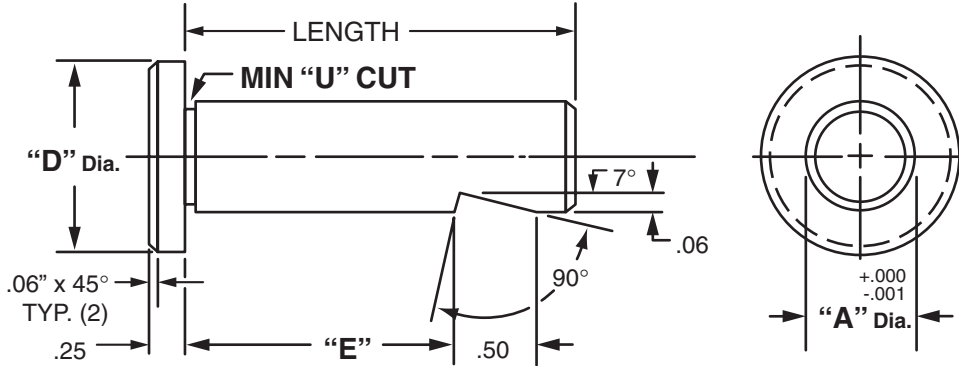


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MASTERLINE HEAD TYPE WHISTLENOTCH SHAFT



"A" Dia.	"D" Dia.	Cad File No.
.250	.50	WZ249
.375	.62	WZ374
.500	1.00	WZ499
.625	1.12	WZ624
.750	1.25	WZ749
.875	1.38	WZ874

"A" Dia.	"D" Dia.	Cad File No.
1.000	1.50	WZ999
1.125	1.75	WZ1124
1.250	1.88	WZ1249
1.375	2.00	WZ1374
1.500	2.12	WZ1499

Available in four (4) series:

- "WS" – 12L14 CRS
- "WM" – T.G. & P. Alloy, HDN R_c 28-32
- "WH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.03 min. case)
- "WY" – 304 Stainless Steel

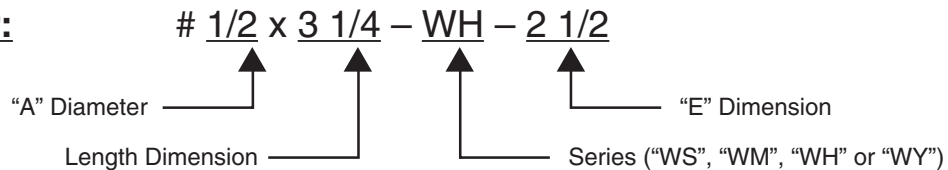
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. III, page 11 and Sec. V, page 1 & 4)

Masterline Head Type Whistlenotch Shaft

How To Order:



All Parts Available In Inch And Metric.

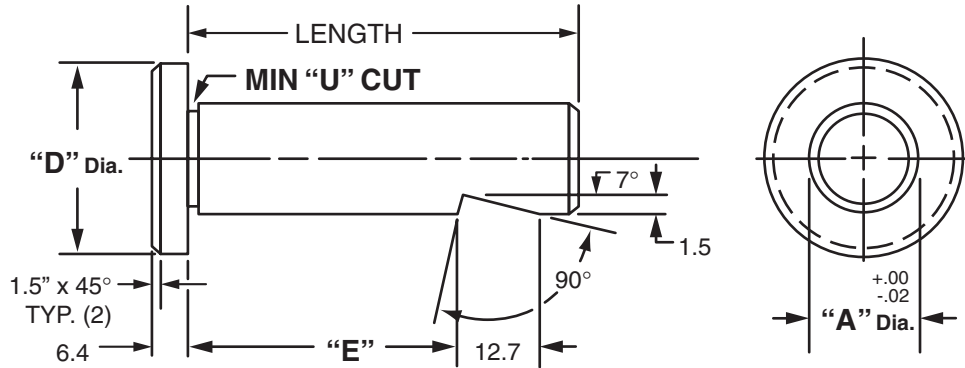


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MASTERLINE METRIC HEAD TYPE WHISTLENOTCH SHAFT



"A" Dia.	"D" Dia.	Cad File No.
6M	12.7M	WZ6M
8M	15.8M	WZ8M
10M	19.0M	WZ10M
12M	25.4M	WZ12M
14M	25.4M	WZ14M
16M	31.7M	WZ16M

"A" Dia.	"D" Dia.	Cad File No.
18M	31.7M	WZ18M
20M	38.1M	WZ20M
25M	44.4M	WZ25M
30M	50.8M	WZ30M
35M	50.8M	WZ35M
40M	53.8M	WZ40M

Available in four (4) series:

- "WS" – 12L14 CRS
- "WM" – T.G. & P. Alloy, HDN R_c 28-32
- "WH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.75 min. case)
- "WY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

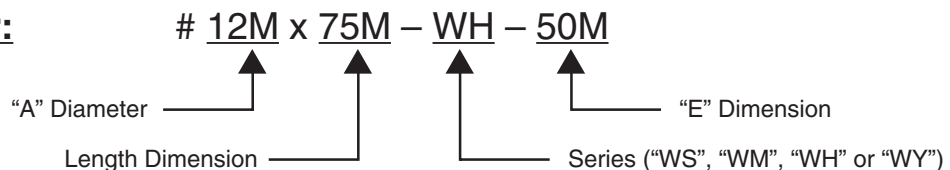
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. III, page 12 and Sec. V, page 1 & 4)

Masterline Metric Head Type Whistlenotch Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

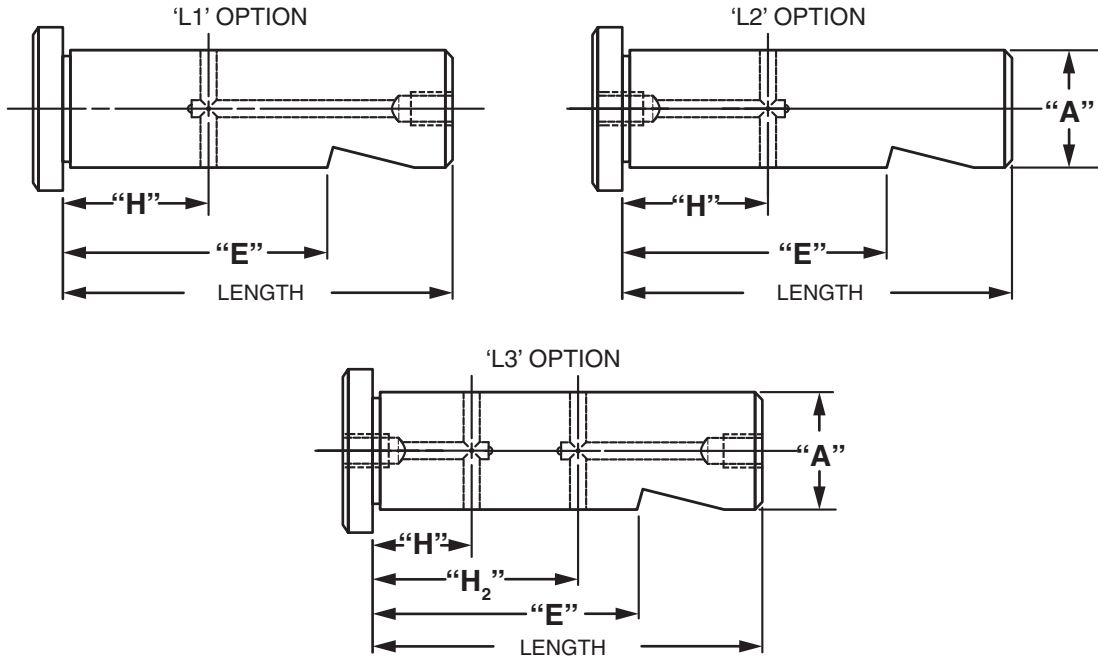


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MASTERLINE HEAD TYPE WHISTLENOTCH SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

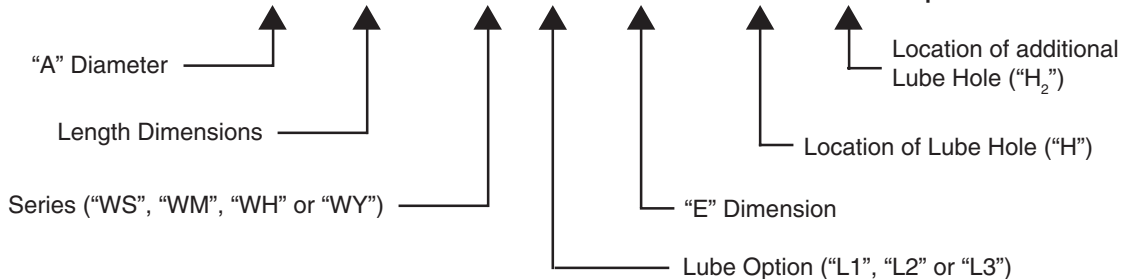
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Head Type Whistlenotch Shaft with Lube Hole

(Note: Refer to Section III, page 9 for additional ordering information)

How To Order: # 1/2 x 3 1/4 - WH L1 - 2 1/2 - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

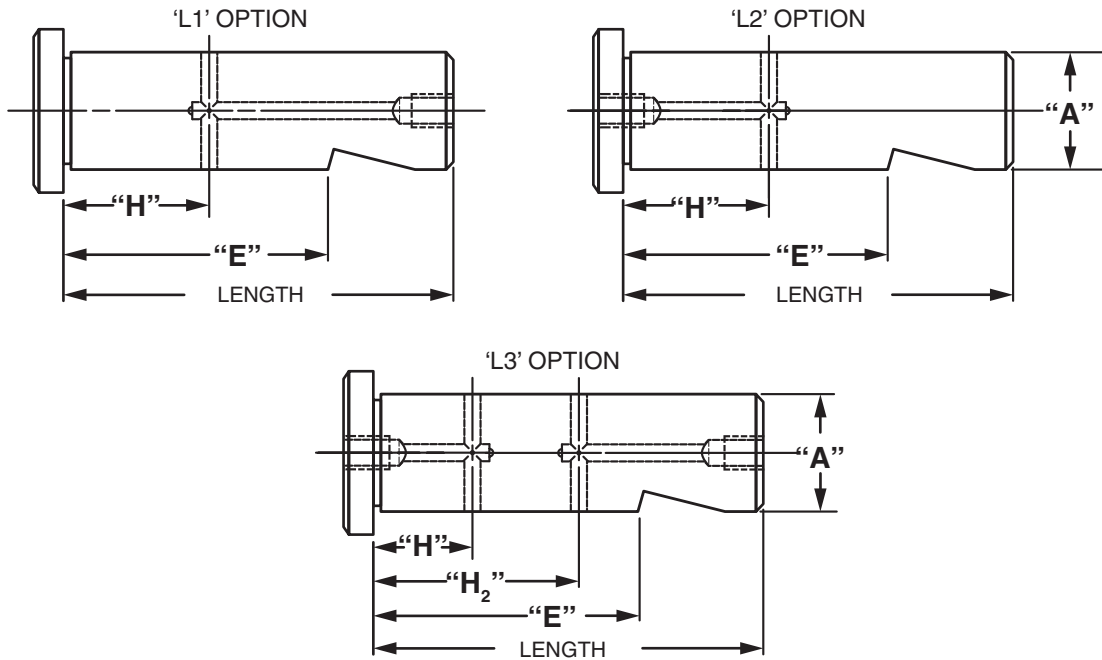


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MASTERLINE METRIC HEAD TYPE WHISTLENOTCH SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

“L1” & “L3” options are not available under 13M dia. shaft

“L1” & “L3” options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

“L2” option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

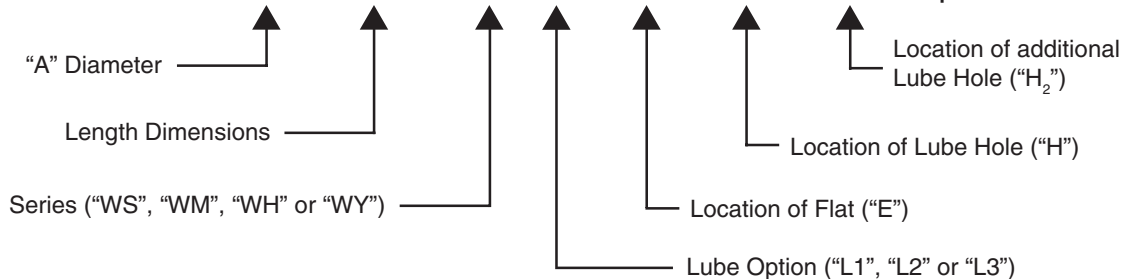
Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

“L3” option is recommended for use on shafts 250M or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Metric Head Type Whistlenotch Shaft with Lube Hole

(Note: Refer to Section III, page 10 for additional ordering information)

How To Order: # 12M x 75M – WH L1 – 50M – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

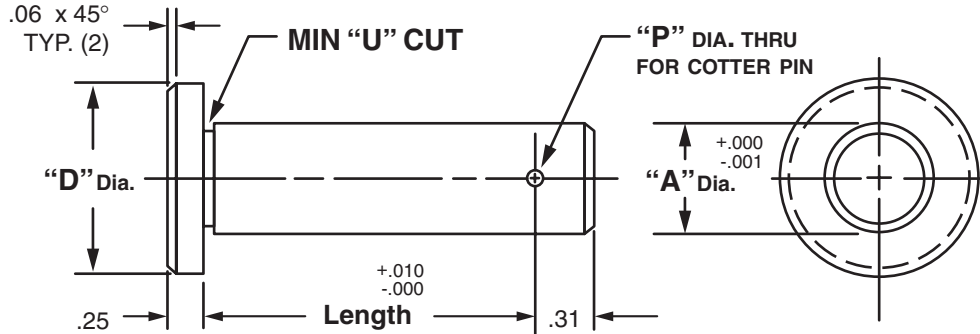


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MASTERLINE HEAD TYPE COTTER PIN SHAFT



"A" Dia.	"D" Dia.	"P" Dia.	Cad File No.
.250	.50	.07	CZ249
.375	.62	.11	CZ374
.500	1.00	.14	CZ499
.625	1.12	.14	CZ624
.750	1.25	.17	CZ749
.875	1.38	.17	CZ874

"A" Dia.	"D" Dia.	"P" Dia.	Cad File No.
1.000	1.50	.17	CZ999
1.250	1.75	.20	CZ1124
1.250	1.88	.20	CZ1249
1.375	2.00	.23	CZ1374
1.500	2.12	.27	CZ1499

Available in four (4) series:

- "CS" – 12L14 CRS
- "CM" – T.G. & P. Alloy, HDN R_C 28-32
- "CH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)
- "CY" – 304 Stainless Steel

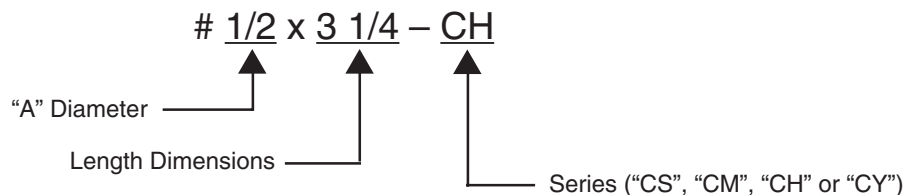
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 15 and Sec. V, page 1 & 4)

Masterline Head Type Cotter Pin Shaft

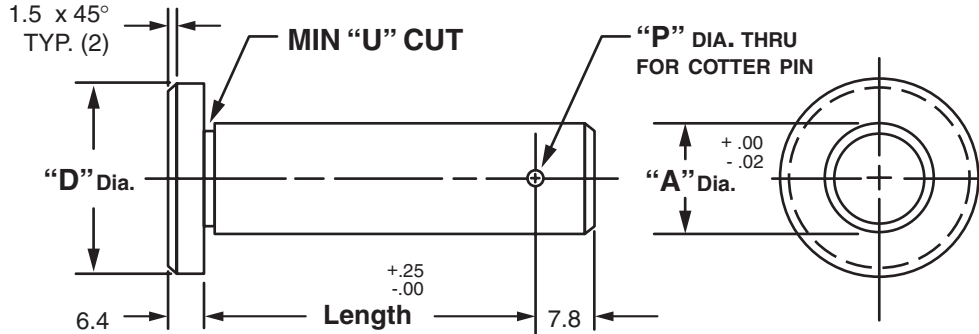
How To Order:



All Parts Available In Inch And Metric.



MASTERLINE METRIC HEAD TYPE COTTER PIN SHAFT



"A" Dia.	"D" Dia.	"P" Dia.
6M	12.7M	2.8M
8M	15.8M	3.6M
10M	19.0M	3.6M
12M	25.4M	3.6M
14M	25.4M	3.6M
16M	31.7M	4.4M

"A" Dia.	"D" Dia.	"P" Dia.
18M	31.7M	4.4M
20M	38.1M	5.2M
25M	44.4M	5.2M
30M	50.8M	5.2M
35M	50.8M	5.2M
40M	53.8M	6.7M

Available in four (4) series:

- "CS" – 12L14 CRS
- "CM" – T.G. & P. Alloy, HDN R_c 28-32
- "CH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.75mm min. case)
- "CY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

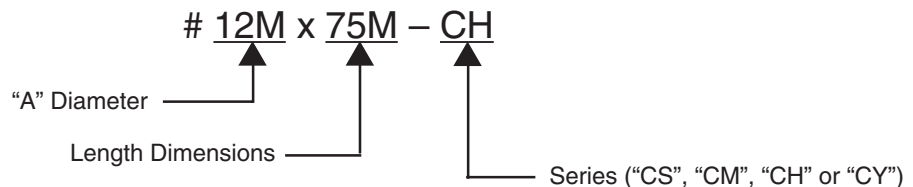
Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 16 and Sec. V, page 1 & 4)

Masterline Metric Head Type Cotter Pin Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

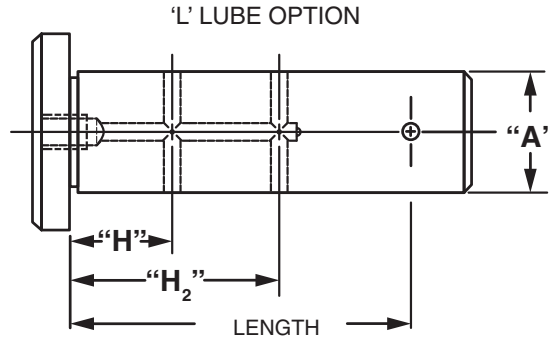


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MASTERLINE HEAD TYPE COTTER PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

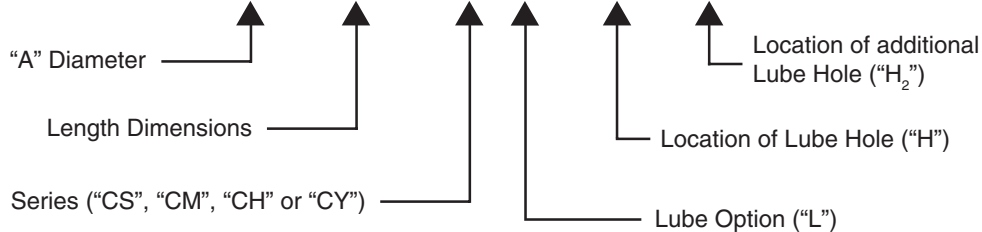
"L" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.
 All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Head Type Cotter Pin Shaft with Lube Hole

(Note: Refer to Section III, page 13 for additional ordering information)

How To Order: # 1/2 x 3 1/4 - CH L - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

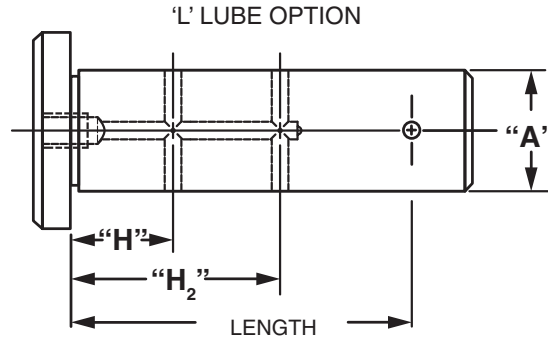


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MASTERLINE METRIC HEAD TYPE COTTER PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

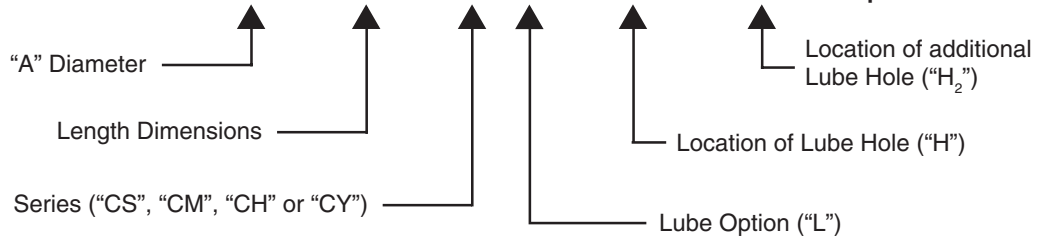
“L” option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.
All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Metric Head Type Cotter Pin Shaft with Lube Hole

(Note: Refer to Section III, page 14 for additional ordering information)

How To Order: # 12M x 75M – CH L – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

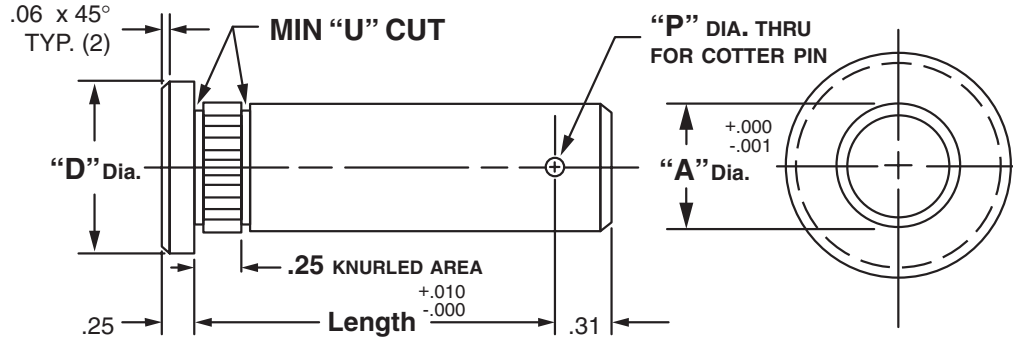


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MASTERLINE HEAD TYPE KNURLED COTTER PIN SHAFT



"A" Dia.	"D" Dia.	"P" Dia.	Cad File No.
.250	.50	.07	KCZ249
.375	.62	.11	KCZ374
.500	1.00	.14	KCZ499
.625	1.12	.14	KCZ624
.750	1.25	.17	KCZ749
.875	1.38	.17	KCZ874

"A" Dia.	"D" Dia.	"P" Dia.	Cad File No.
1.000	1.50	.17	KCZ999
1.250	1.75	.20	KCZ1124
1.250	1.88	.20	KCZ1249
1.375	2.00	.23	KCZ1374
1.500	2.12	.27	KCZ1499

Available in four (4) series:

- "KCS" – 12L14 CRS
- "KCM" – T.G. & P. Alloy, HDN R_C 28-32
- "KCH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)
- "KCY" – 304 Stainless Steel

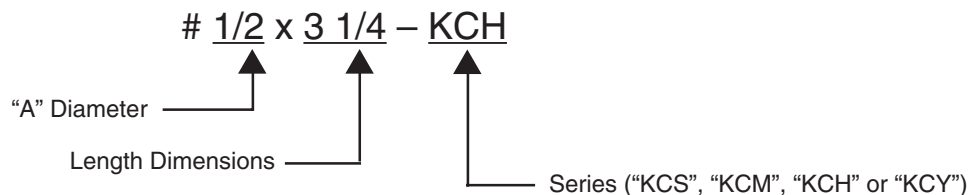
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 19 and Sec. V, page 1 & 4)

Masterline Head Type Knurled Cotter Pin Shaft

How To Order:



All Parts Available In Inch And Metric.

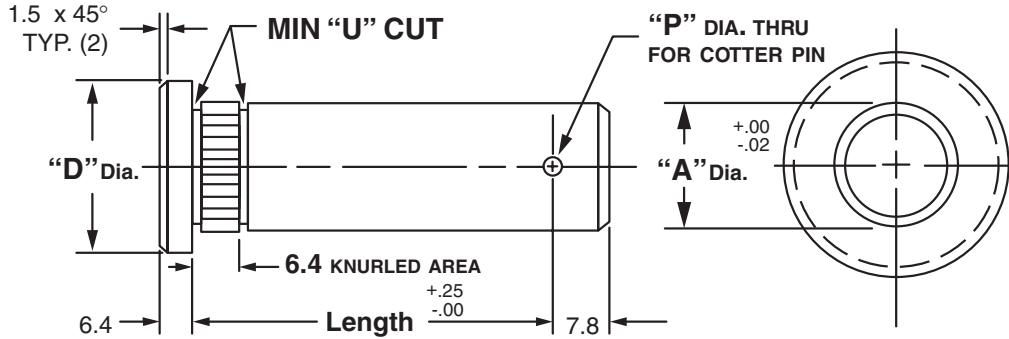


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MASTERLINE METRIC HEAD TYPE KNURLED COTTER PIN SHAFT



"A" Dia.	"D" Dia.	"P" Dia.
6M	12.7M	2.8M
8M	15.8M	3.6M
10M	19.0M	3.6M
12M	25.4M	3.6M
14M	25.4M	3.6M
16M	31.7M	4.4M

"A" Dia.	"D" Dia.	"P" Dia.
18M	31.7M	4.4M
20M	38.1M	5.2M
25M	44.4M	5.2M
30M	50.8M	5.2M
35M	50.8M	5.2M
40M	53.8M	6.7M

Available in four (4) series:

- "KCS" – 12L14 CRS
- "KCM" – T.G. & P. Alloy, HDN R_c 28-32
- "KCH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.75mm min. case)
- "KCY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

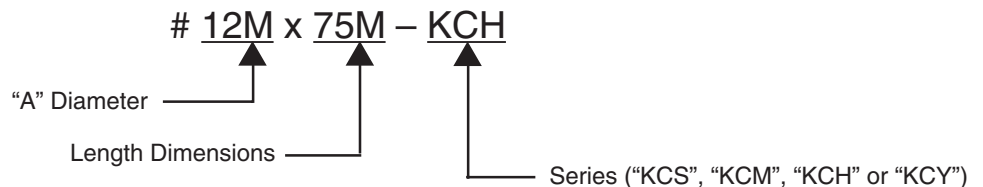
Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 20 and Sec. V, page 1 & 4)

Masterline Metric Head Type Knurled Cotter Pin Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

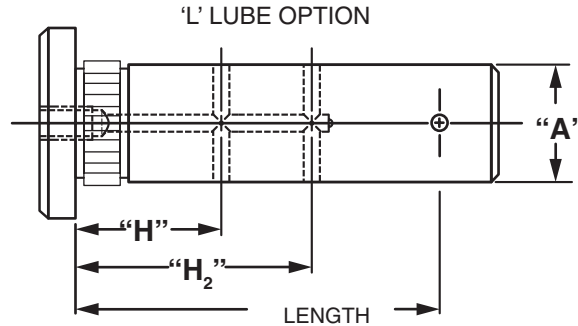


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MASTERLINE HEAD TYPE KNURLED COTTER PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

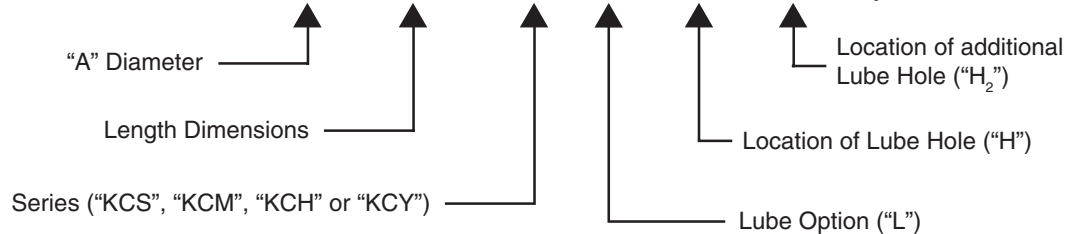
"L" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.
All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Head Type Knurled Cotter Pin Shaft with Lube Hole

(Note: Refer to Section III, page 17 for additional ordering information)

How To Order: # 1/2 x 3 1/4 – KCH L – 1 5/8 – 2 – Optional Thread



All Parts Available In Inch And Metric.

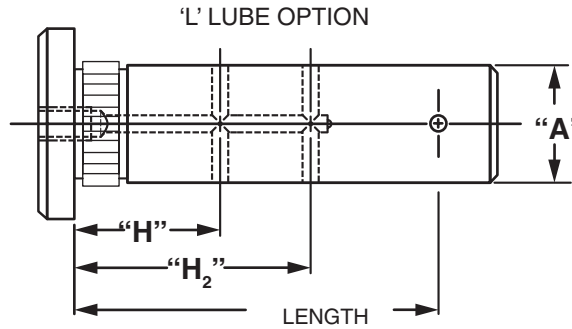


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MASTERLINE METRIC HEAD TYPE KNURLED COTTER PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

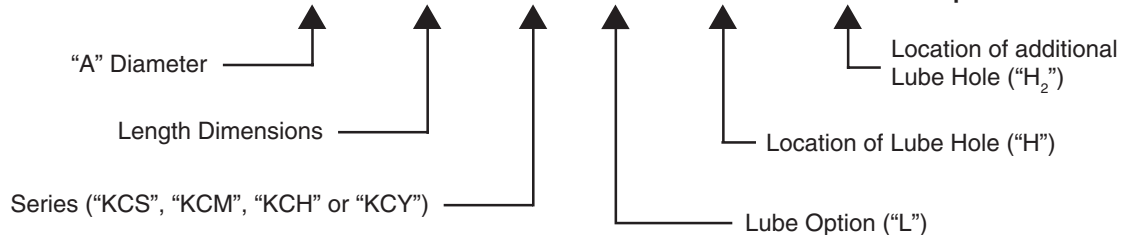
“L” option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.
All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Metric Head Type Knurled Cotter Pin Shaft with Lube Hole

(Note: Refer to Section III, page 18 for additional ordering information)

How To Order: # 12M x 75M – KCH L – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

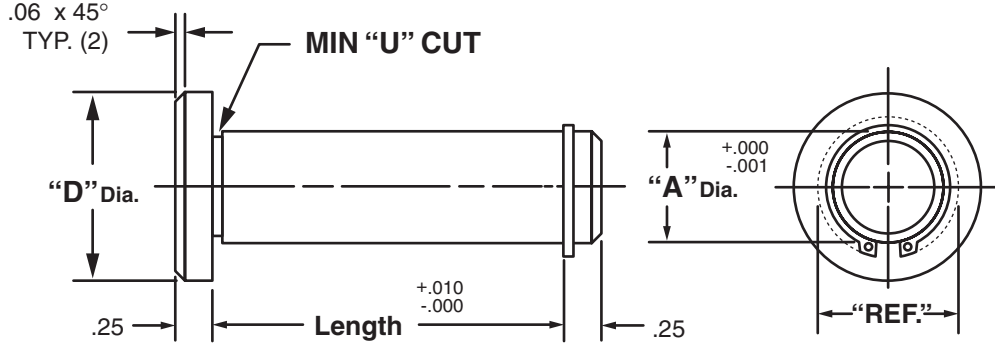


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MASTERLINE HEAD TYPE SNAP RING SHAFT



"A" Dia.	"D" Dia.	"REF" Dim.	Cad File No.
.250	.50	.43	HPZ249
.375	.62	.59	HPZ374
.500	1.00	.74	HPZ499
.625	1.12	.87	HPZ624
.750	1.25	1.05	HPZ749
.875	1.38	1.16	HPZ874

"A" Dia.	"D" Dia.	"REF" Dim.	Cad File No.
1.000	1.50	1.35	HPZ999
1.250	1.75	1.49	HPZ1124
1.250	1.88	1.62	HPZ1249
1.375	2.00	1.72	HPZ1374
1.500	2.12	1.90	HPZ1499

Available in four (4) series:

- "HRS" – 12L14 CRS
- "HRM" – T.G. & P. Alloy, HDN R_C 28-32
- "HRH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)
- "HRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and one (1) snap ring.

NOTE: Snap rings under 1/4" diameter are made of copper/beryllium.

Stainless steel snap rings provided with "HRY" series.

Shafts and snap rings may be ordered separately.

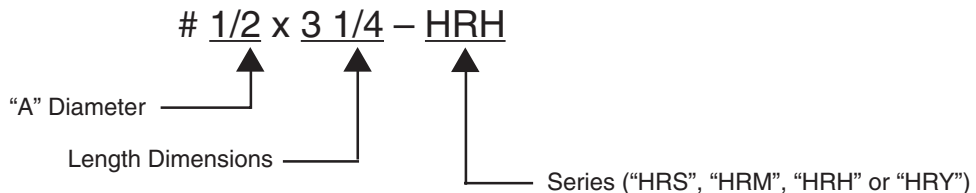
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 23 and Sec. V, page 1 & 4)

Masterline Head Type Snap Ring Shaft

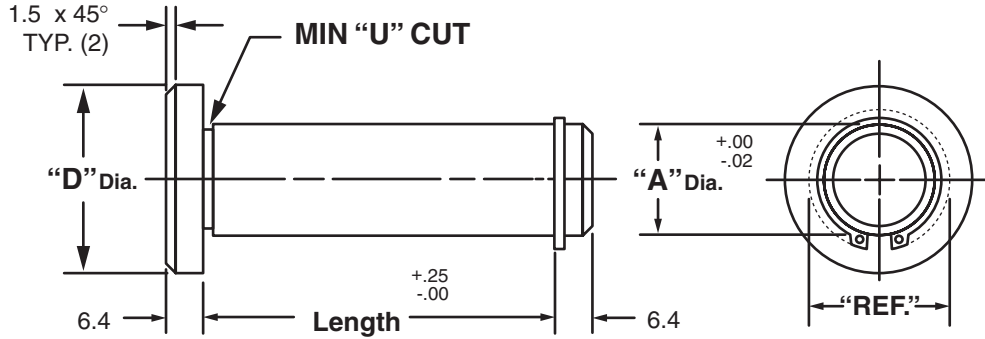
How To Order:



All Parts Available In Inch And Metric.



MASTERLINE METRIC HEAD TYPE SNAP RING SHAFT



"A" Dia.	"D" Dia.	"REF" Dia.
6M	12.7M	9.1M
8M	15.8M	13.7M
10M	19.0M	15.7M
12M	25.4M	17.5M
14M	25.4M	20.6M
16M	31.7M	23.9M

"A" Dia.	"D" Dia.	"REF" Dia.
18M	31.7M	27.7M
20M	38.1M	28.4M
25M	44.4M	35.6M
30M	50.8M	41.1M
35M	50.8M	46.0M
40M	53.8M	50.8M

Available in four (4) series:

- "HRS" – 12L14 CRS
- "HRM" – T.G. & P. Alloy, HDN R_C 28-32
- "HRH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.75mm min. case)
- "HRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and one (1) snap ring.

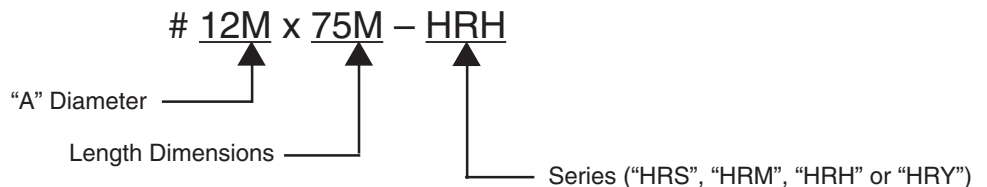
NOTE: Snap rings under 7mm diameter are made of copper/beryllium.
 Stainless steel snap rings provided with "HRY" series.
 Shafts and snap rings may be ordered separately.
 Other diameters are available on request. (see "How To Order")
 Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 24 and Sec. V, page 1 & 4)

Masterline Metric Head Type Snap Ring Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

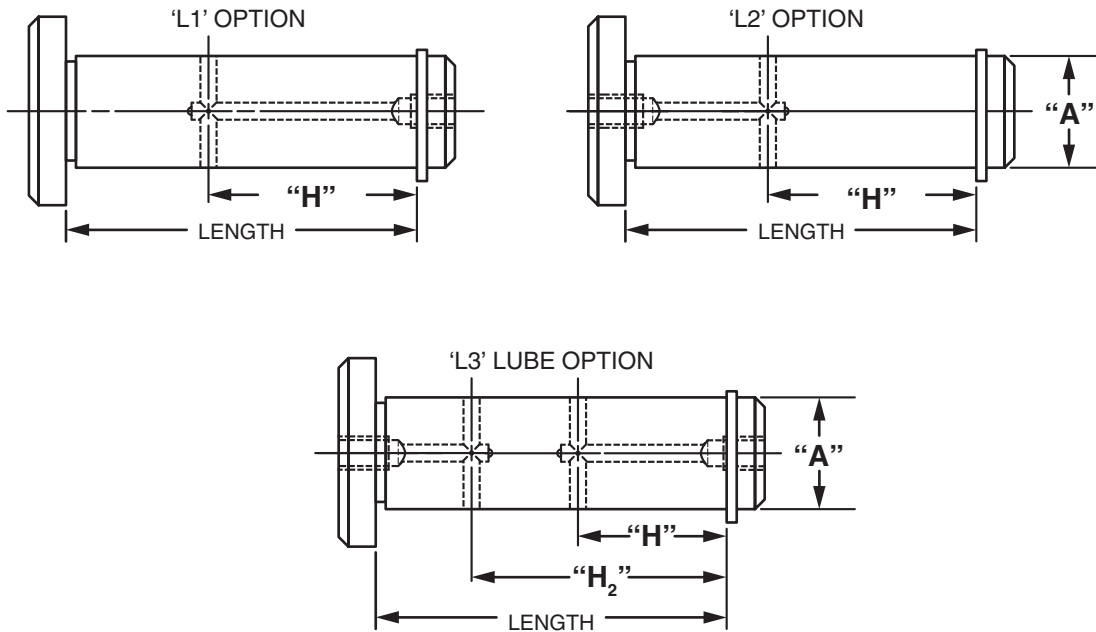


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MASTERLINE HEAD TYPE SNAP RING SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of snap ring.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

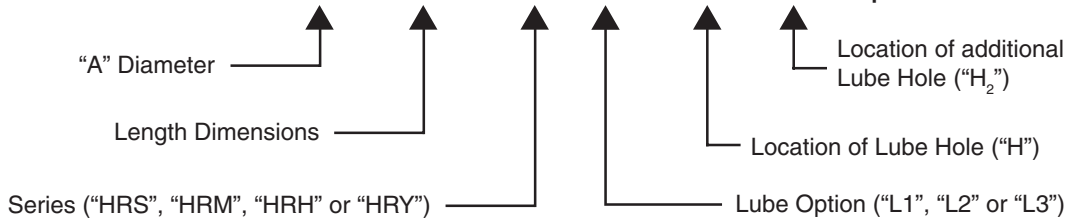
Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Head Type Snap Ring Shaft with Lube Hole

(Note: Refer to Section III, page 21 for additional ordering information)

How To Order: # 1/2 x 3 1/4 - HRH L1 - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

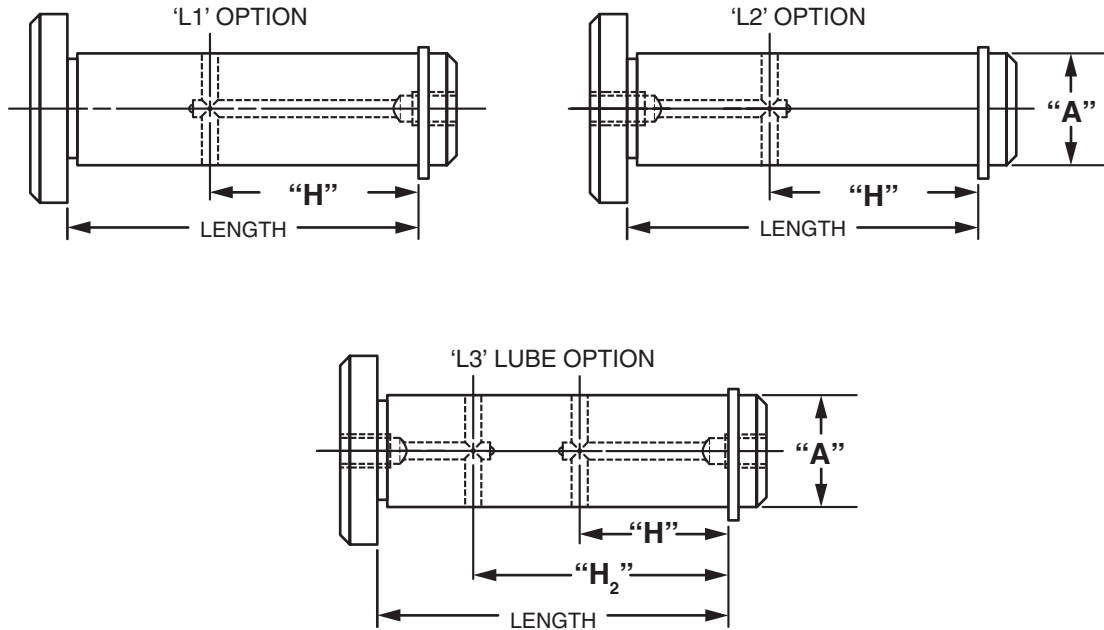


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MASTERLINE METRIC HEAD TYPE SNAP RING SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of snap ring.

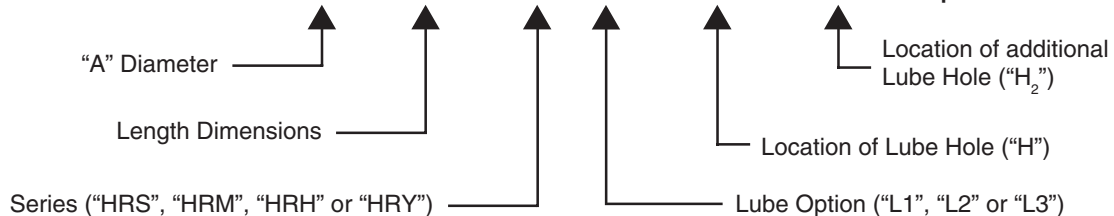
"L1" & "L3" options are not available under 13M dia. shaft
 "L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.
 "L2" option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.
 All other diameter shafts have 1/8 - 27 N.P.T. in ends.
 Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250M or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Metric Head Type Snap Ring Shaft with Lube Hole

(Note: Refer to Section III, page 22 for additional ordering information)

How To Order: # 12M x 75M – HRH L1 – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

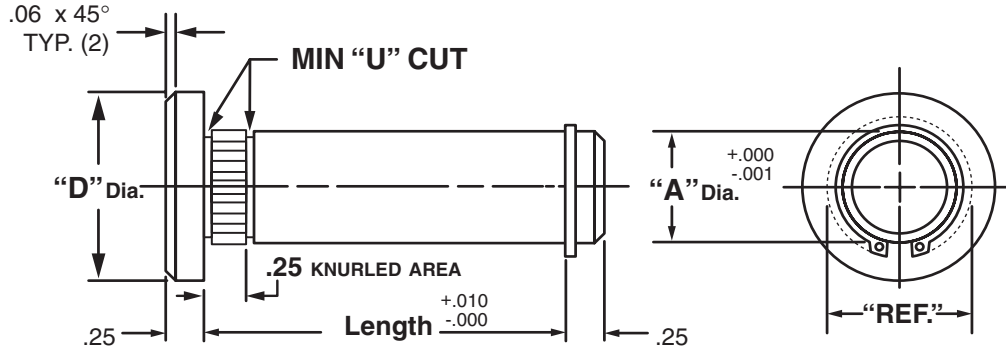


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MASTERLINE HEAD TYPE KNURLED SNAP RING SHAFT



"A" Dia.	"D" Dia.	"REF" Dia.	Cad File No.
.250	.50	.43	KRZ249
.375	.62	.59	KRZ374
.500	1.00	.74	KRZ499
.625	1.12	.87	KRZ624
.750	1.25	1.05	KRZ749
.875	1.38	1.16	KRZ874

"A" Dia.	"D" Dia.	"REF" Dia.	Cad File No.
1.000	1.50	1.35	KRZ999
1.250	1.75	1.49	KRZ1124
1.250	1.88	1.62	KRZ1249
1.375	2.00	1.72	KRZ1374
1.500	2.12	1.90	KRZ1499

Available in four (4) series:

- "KRS" – 12L14 CRS
- "KRM" – T.G. & P. Alloy, HDN R_C 28-32
- "KRH" – 12L14 CRS, CARB., HDN. & GR., R_C 56-60 (.03 min. case)
- "KRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and one (1) snap ring.

NOTE: Snap rings under 1/4" diameter are made of copper/beryllium.

Stainless steel snap rings provided with "KRY" series.

Shafts and snap rings may be ordered separately.

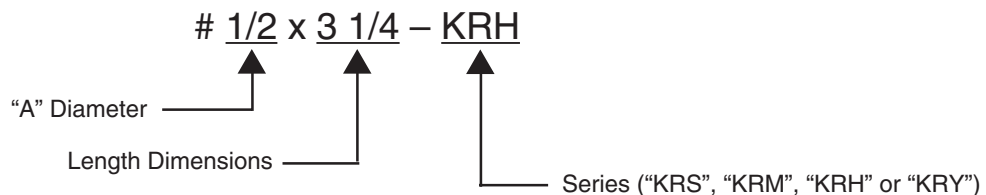
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 27 and Sec. V, page 1 & 4)

Masterline Head Type Knurled Snap Ring Shaft

How To Order:



All Parts Available In Inch And Metric.

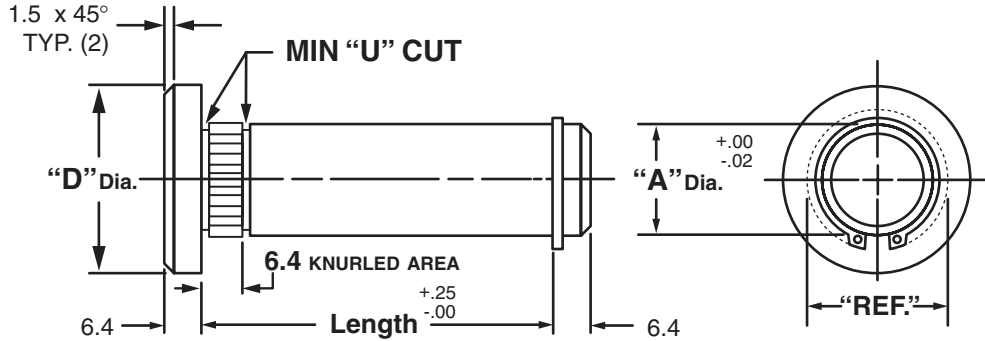


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MASTERLINE METRIC HEAD TYPE KNURLED SNAP RING SHAFT



"A" Dia.	"D" Dia.	"REF" Dia.	"A" Dia.	"D" Dia.	"REF" Dia.
6M	12.7M	9.1M	18M	31.7M	27.7M
8M	15.8M	13.7M	20M	38.1M	28.4M
10M	19.0M	15.7M	25M	44.4M	35.6M
12M	25.4M	17.5M	30M	50.8M	41.1M
14M	25.4M	20.6M	35M	50.8M	46.0M
16M	31.7M	23.9M	40M	53.8M	50.8M

Available in four (4) series:

- "KRS" – 12L14 CRS
- "KRM" – T.G. & P. Alloy, HDN R_c 28-32
- "KRH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.75mm min. case)
- "KRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and one (1) snap ring.

NOTE: Snap rings under 7mm diameter are made of copper/beryllium.

Stainless steel snap rings provided with "KRY" series.

Shafts and snap rings may be ordered separately.

Other diameters are available on request. (see "How To Order")

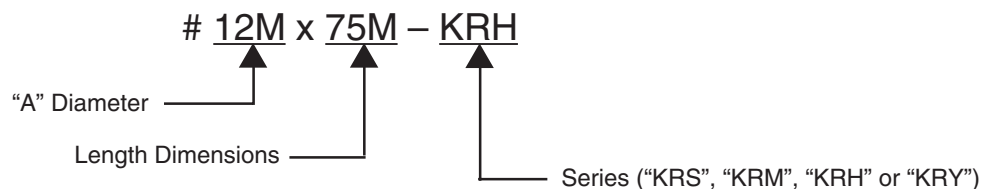
Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 28 and Sec. V, page 1 & 4)

Masterline Metric Head Type Knurled Snap Ring Shaft

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:



All Parts Available In Inch And Metric.

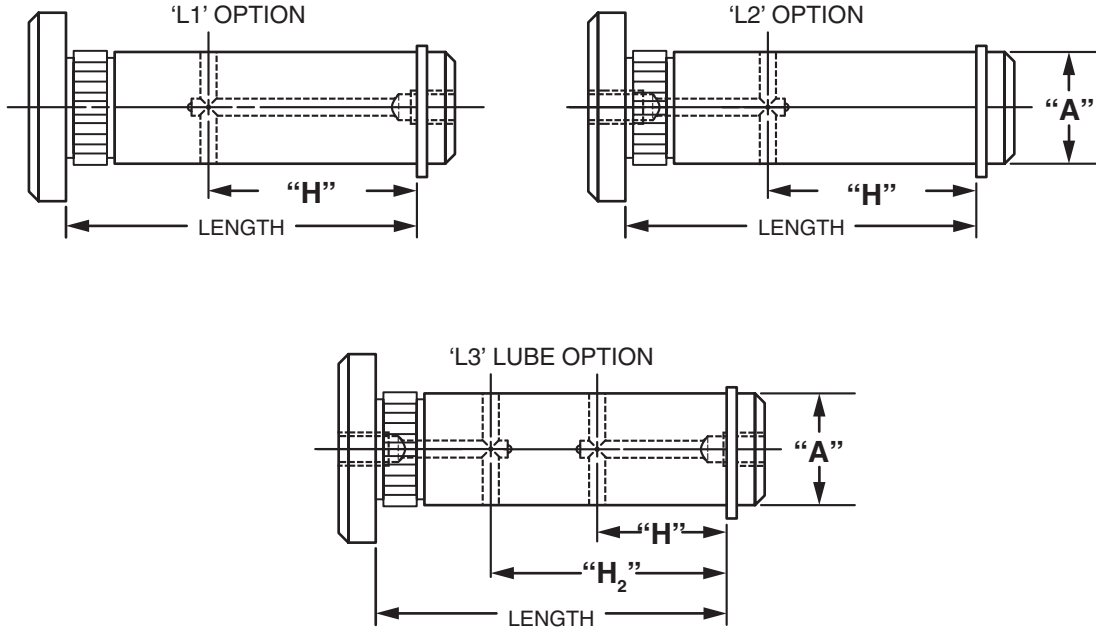


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MASTERLINE HEAD TYPE KNURLED SNAP RING SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of snap ring.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

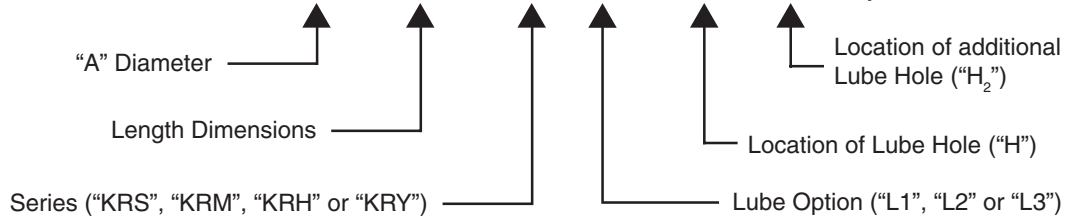
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Head Type Knurled Snap Ring Shaft with Lube Hole

(Note: Refer to Section III, page 25 for additional ordering information)

How To Order: # 1/2 x 3 1/4 – KRH L1 – 1 5/8 – 2 – Optional Thread



All Parts Available In Inch And Metric.

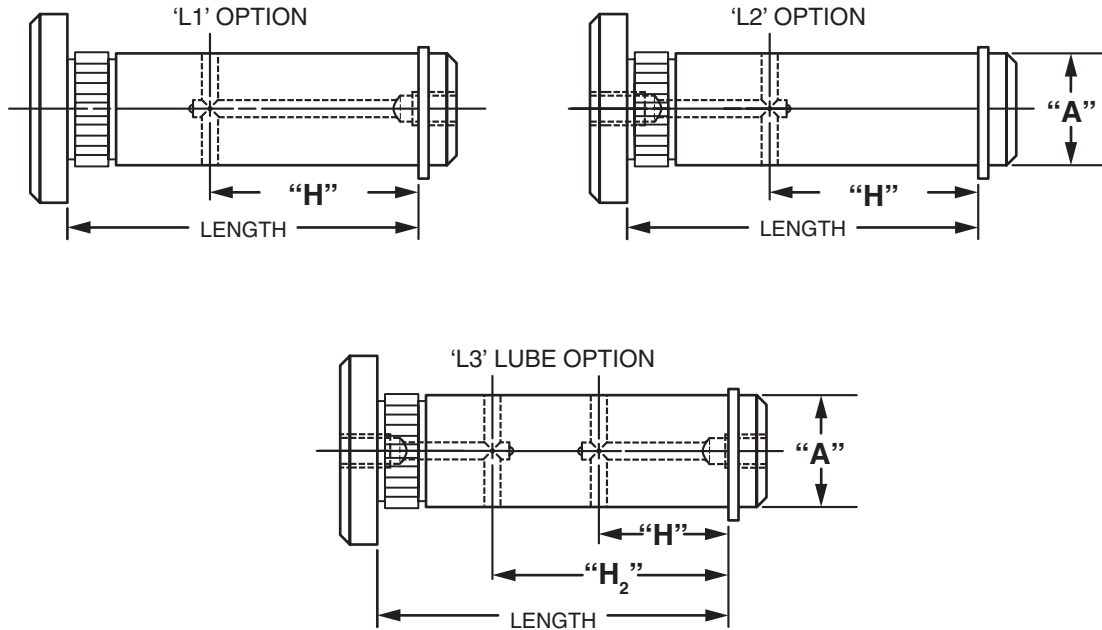


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MASTERLINE METRIC HEAD TYPE KNURLED SNAP RING SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of snap ring.

"L1" & "L3" options are not available under 13M dia. shaft

"L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

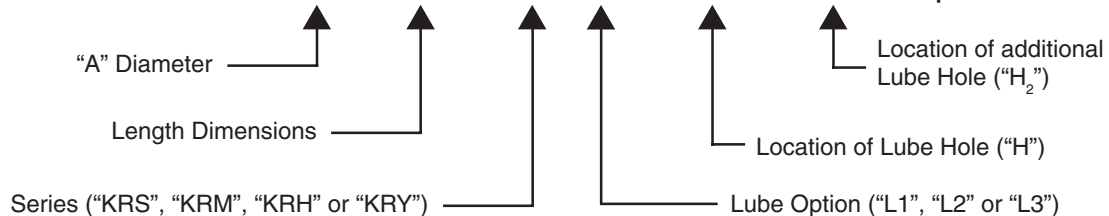
Optional thread for 1/4 – 28 is M6-1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250M or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

Masterline Metric Head Type Knurled Snap Ring Shaft with Lube Hole

(Note: Refer to Section III, page 26 for additional ordering information)

How To Order: # 12M x 75M – HRH L1 – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

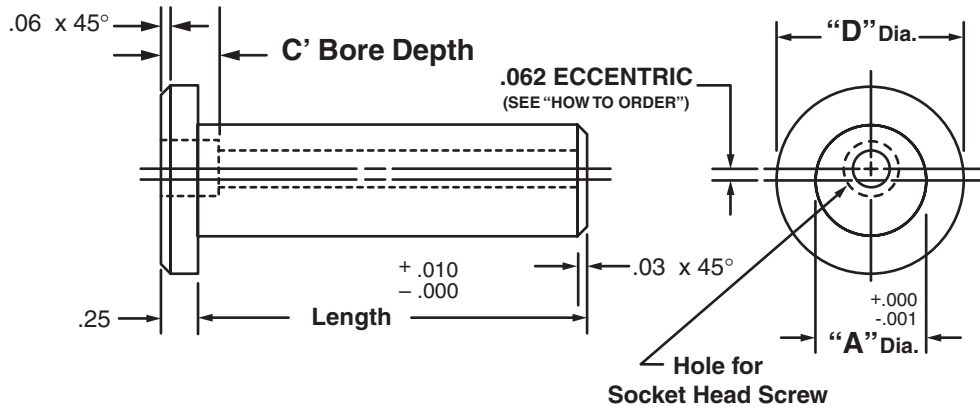


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MASTERLINE PIVOT PIN



Pivot Pin No.	"A" Dia.	"D" Dia.	Soc. Hd. Scr.	C' Bore Depth	Cad File No.
MP1	.375	.88	# 8	.16	MP1
MP2	.437	.94	# 10	.19	MP2
MP3	.500	1.00	# 10	.19	MP3
MP4	.625	1.12	1/4	.25	MP4
MP5	.750	1.25	1/4	.25	MP5
MP6	.875	1.38	3/8	.38	MP6
MP7	1.000	1.50	3/8	.38	MP7
MP8	1.125	1.62	1/2	.50	MP8
MP9	1.250	1.75	1/2	.50	MP9
MP10	1.375	2.12	5/8	.62	MP10
MP11	1.500	2.25	5/8	.62	MP11

Available in four (4) series:

"MPS" – 12L14 CRS

"MPM" – T.G. & P. Alloy, HDN R_c 28-32

"MPH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.03 min. case)

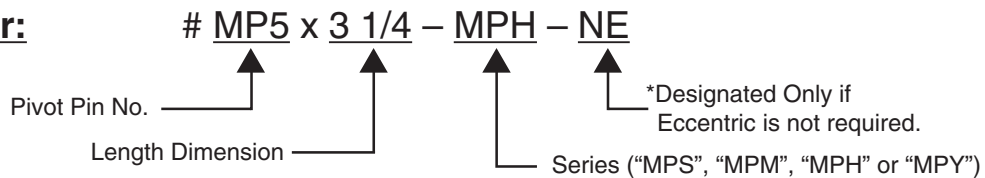
"MPY" – 304 Stainless Steel

Available in lengths up to 12 inches.

Special sizes are available on request. (See "How To Order")

Masterline Pivot Pin

How To Order:



All Parts Available In Inch And Metric.

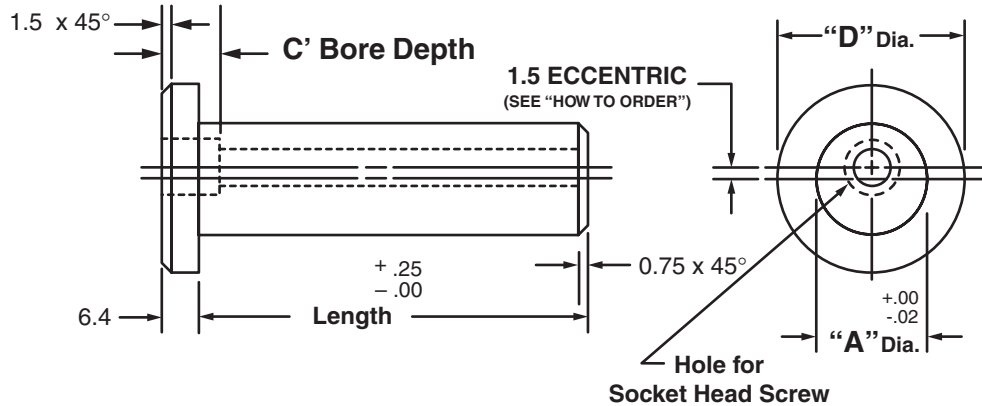


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MASTERLINE METRIC PIVOT PIN



Pivot Pin No.	"A" Dia.	"D" Dia.	Soc. Hd. Scr.	C' Bore Depth	Cad File No.
MMP1	10M	22.3M	2M	2M	MMP1
MMP2	12M	25.4M	4M	4M	MMP2
MMP3	15M	28.5M	4M	4M	MMP3
MMP4	17M	28.5M	6M	6M	MMP4
MMP5	20M	31.7M	6M	6M	MMP5
MMP6	25M	38.1M	8M	8M	MMP6
MMP7	30M	41.1M	10M	10M	MMP7
MMP8	35M	53.8M	12M	12M	MMP8
MMP9	40M	57.1M	16M	16M	MMP9

Available in four (4) series:

"MPS" – 12L14 CRS

"MPM" – T.G. & P. Alloy, HDN R_c 28-32

"MPH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (0.75mm min. case)

"MPY" – 304 Stainless Steel

Available in lengths up to 300 Millimeters.

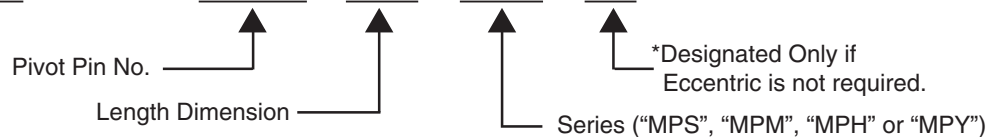
Special sizes are available on request. (See "How To Order")

Masterline Metric Pivot Pin

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:

MMP5 x 76M – MPH – NE



All Parts Available In Inch And Metric.

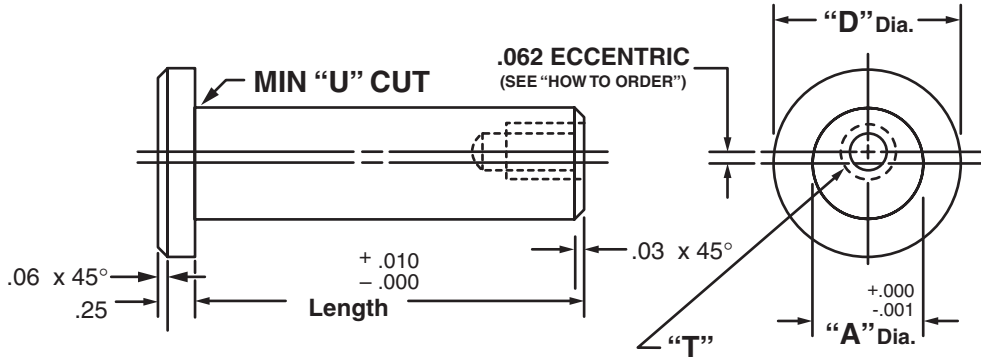


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MASTERLINE TAPPED PIVOT PIN



Pivot Pin No.	"A" Dia.	"D" Dia.	"T" Tapped Hole	Cad File No.
MT1	.375	.88	# 8 - 32 x 1/2" DP.	MT1
MT2	.437	.94	# 10-24 x 1/2" DP.	MT2
MT3	.500	1.00	# 10-24 x 1/2" DP.	MT3
MT4	.625	1.12	1/4-20 x 5/8" DP.	MT4
MT5	.750	1.25	3/8-16 x 3/4" DP.	MT5
MT6	.875	1.38	3/8-16 x 3/4" DP.	MT6
MT7	1.000	1.50	3/8-16 x 3/4" DP.	MT7
MT8	1.125	1.62	1/2-13 x 1" DP.	MT8
MT9	1.250	1.75	1/2-13 x 1" DP.	MT9
MT10	1.375	2.12	5/8-11 x 1 1/4" DP.	MT10
MT11	1.500	2.25	5/8-11 x 1 1/4" DP.	MT11

Available in four (4) series:

- "MTS" - 12L14 CRS
- "MTM" - T.G. & P. Alloy, HDN R_c 28-32
- "MTH" - 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (.03 min. case)
- "MTY" - 304 Stainless Steel

Available in lengths up to 12 inches.

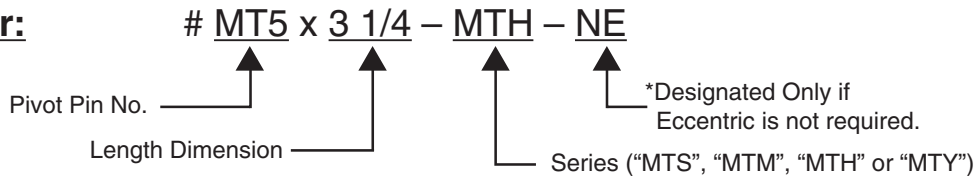
Special sizes are available on request. (See "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. III, page 33 and Sec. V, page 1 & 4)

Masterline Tapped Pivot Pin

How To Order:



All Parts Available In Inch And Metric.

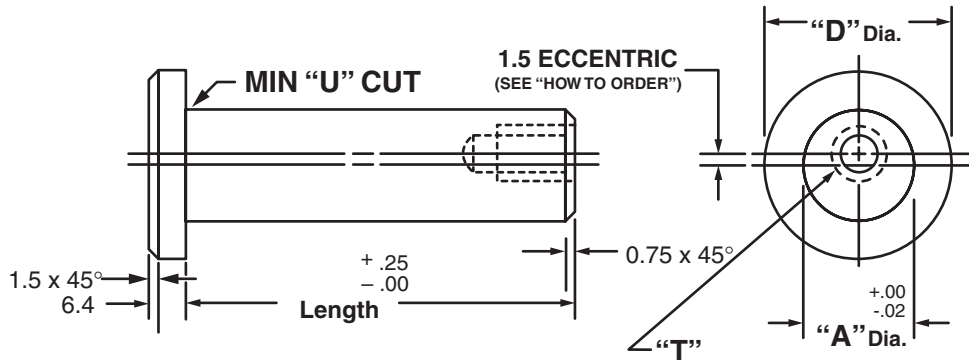


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MASTERLINE METRIC TAPPED PIVOT PIN



Pivot Pin No.	"A" Dia.	"D" Dia.	"T" Tapped Hole	"T" Tap Options	Cad File No.
MMT1	10M	22.3M	2-0.4 x 10M DP.	# 8 – 32 x 1/2" DP.	MMT1
MMT2	12M	25.4M	4-0.7 x 10M DP.	# 10-24 x 1/2" DP.	MMT2
MMT3	15M	28.5M	4-0.7 x 10M DP.	# 10-24 x 1/2" DP.	MMT3
MMT4	17M	28.5M	6-1.0 x 12M DP.	1/4-20 x 5/8" DP.	MMT4
MMT5	20M	31.7M	6-1.0 x 12M DP.	3/8-16 x 3/4" DP.	MMT5
MMT6	25M	38.1M	8-1.25 x 16M DP.	3/8-16 x 3/4" DP.	MMT6
MMT7	30M	41.1M	10-1.5 x 20M DP.	1/2-13 x 1" DP.	MMT7
MMT8	35M	53.8M	12-1.75 x 24M DP.	5/8-11 x 1 1/4" DP.	MMT8
MMT9	40M	57.1M	16-2 x 32M DP.	5/8-11 x 1 1/4" DP.	MMT9

Available in four (4) series:

"MTS" – 12L14 CRS

"MTM" – T.G. & P. Alloy, HDN R_c 28-32

"MTH" – 12L14 CRS, CARB., HDN. & GR., R_c 56-60 (0.75mm min. case)

"MTY" – 304 Stainless Steel

Available in lengths up to 300 Millimeters.

Special sizes are available on request. (See "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

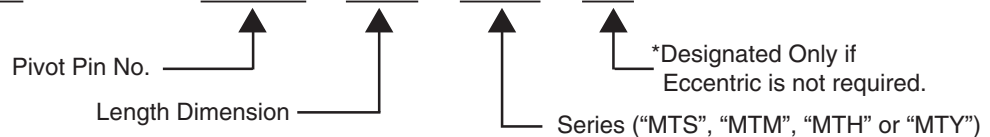
(refer to Sec. III, page 34 and Sec. V, page 1 & 4)

Masterline Metric Tapped Pivot Pin

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

How To Order:

MMT5 x 75M – MTH – NE



All Parts Available In Inch And Metric.

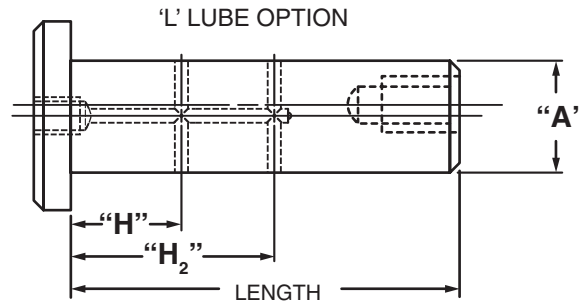


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MASTERLINE HEAD TYPE TAPPED PIVOT PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

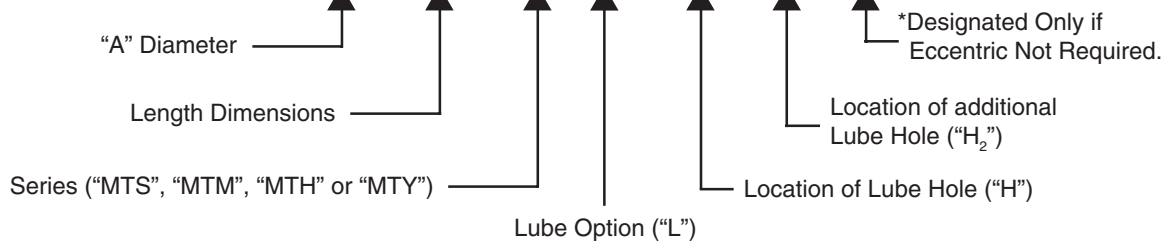
“L” option in 3/8 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.
All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 – 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Head Type Tapped Pin Shaft with Lube Hole

(Note: Refer to Section III, page 31 for additional ordering information)

How To Order: # MT5 x 3 – MTH L – 1 5/8 – 2 – NE – Optional Thread



All Parts Available In Inch And Metric.

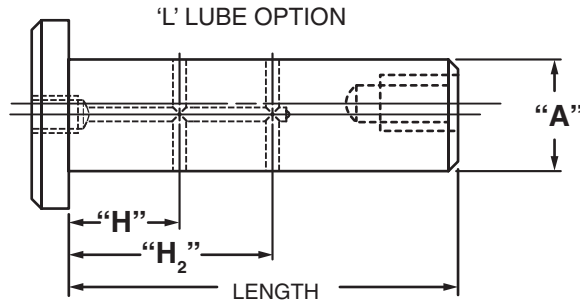


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MASTERLINE METRIC HEAD TYPE TAPPED PIVOT PIN SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from under head.

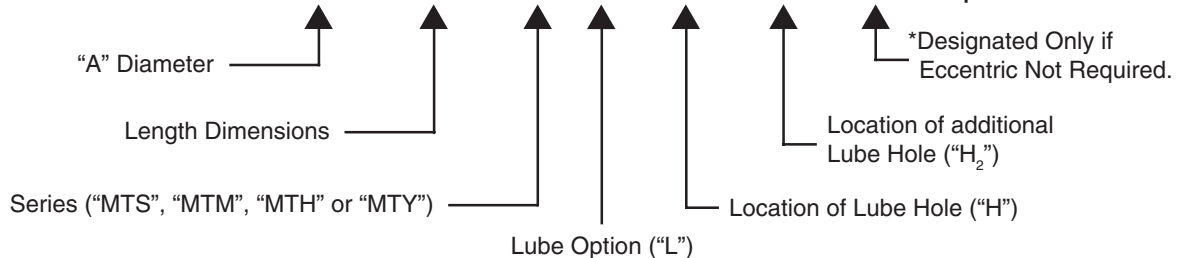
“L” option in 10M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.
All other diameter shafts have 1/8 - 27 N.P.T. in ends.

Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

Masterline Metric Head Type Tapped Pivot Pin Shaft with Lube Hole

(Note: Refer to Section III, page 32 for additional ordering information)

How To Order: # MMT5 x 75M – MTH L – 15M – 20M – NE – Optional Thread



All Parts Available In Inch And Metric.

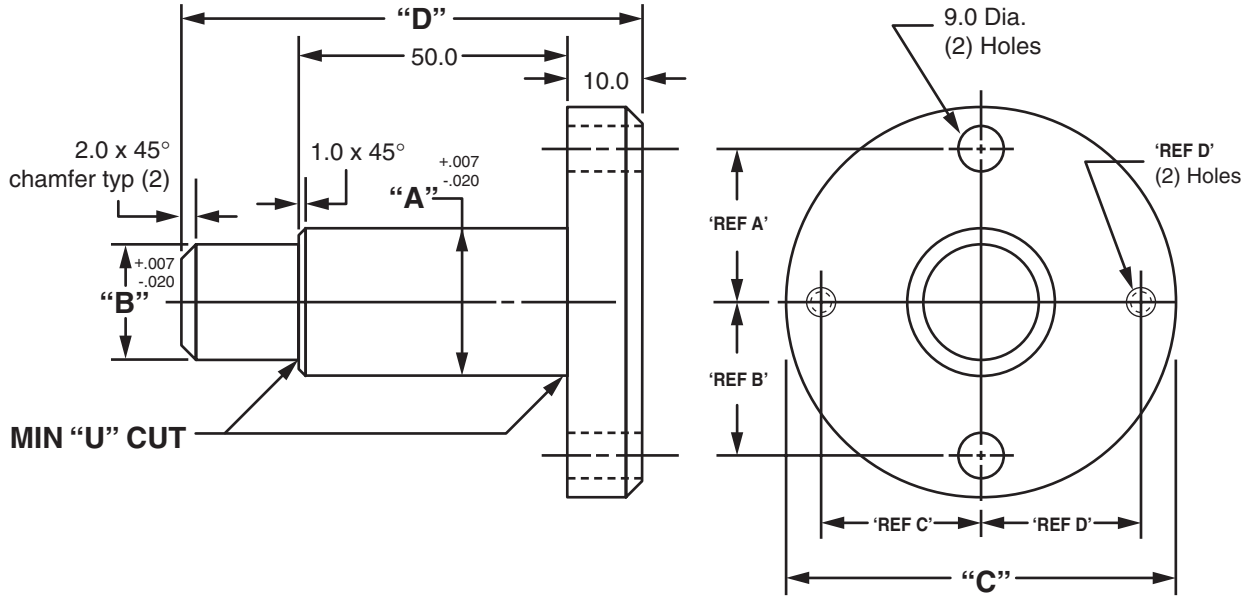


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MASTERLINE STUB SHAFT



	"A"	"B"	"C"	"D"	'Ref. A'	'Ref. B'	'Ref. C'	'Ref. D'	'Ref. E'	Cad File No.
MSS20	30	20	62.0	78.0	23.00	23.00	23.00	23.00	M 8 x 1.25	MSS20
MSS30	38	30	72.0	82.0	28.00	28.00	28.00	28.00	M 8 x 1.25	MSS30
MSS40	50	40	87.0	88.0	35.00	35.00	35.00	35.00	M 10 x 1.25	MSS40

Tolerances: 1 place ± 0.30
2 place ± 0.08

MATERIAL: S.A.E. 1020 H.R.S. Minimum

These parts are compared to NAAMS ADP-201, 301, 401

Note: To order special sizes, not listed above, use the following format:

How To Order:

Masterline Stub Shaft

'A' 'B' 'C' 'D' 'REF A' 'REF B' 'REF C' 'REF D' 'REF E'
Style: #MSS - 60 - 50 - 97 - 105 - 44.00 - 44.00 - 44.00 - 44.00 - M10 x 1.5

All Parts Available In Inch And Metric.

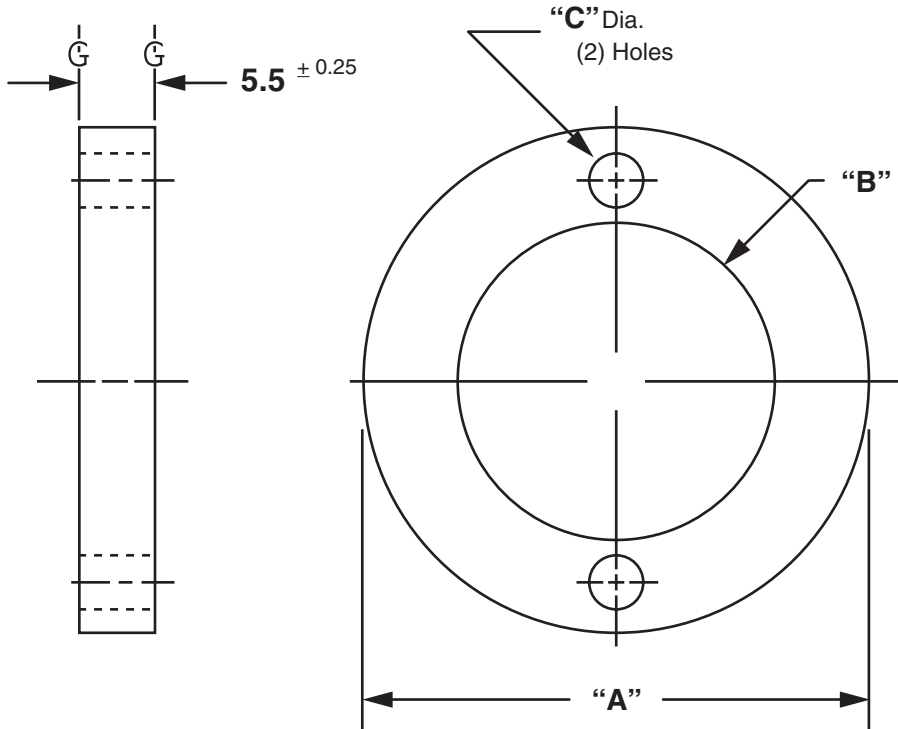


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MASTERLINE STUB SPACER



	"A"	"B"	"C"	REF	Cad File No.
MSS32	76.2	39.0	9.0	28.00	MSS32

Tolerances: 1 place ± 0.30
2 place ± 0.08

MATERIAL: H.R.S. Minimum (Note: Other Materials upon request)

These parts are compared to NAAMS ADP-202, 302, 402

Note: To order special sizes, not listed above, use the following format:

How To Order:

Masterline Stub Spacer

'A' 'B' 'C' REF
Style: #MSS - 95.3 - 67.0 - 9.0 - 43.00 - SP

All Parts Available In Inch And Metric.

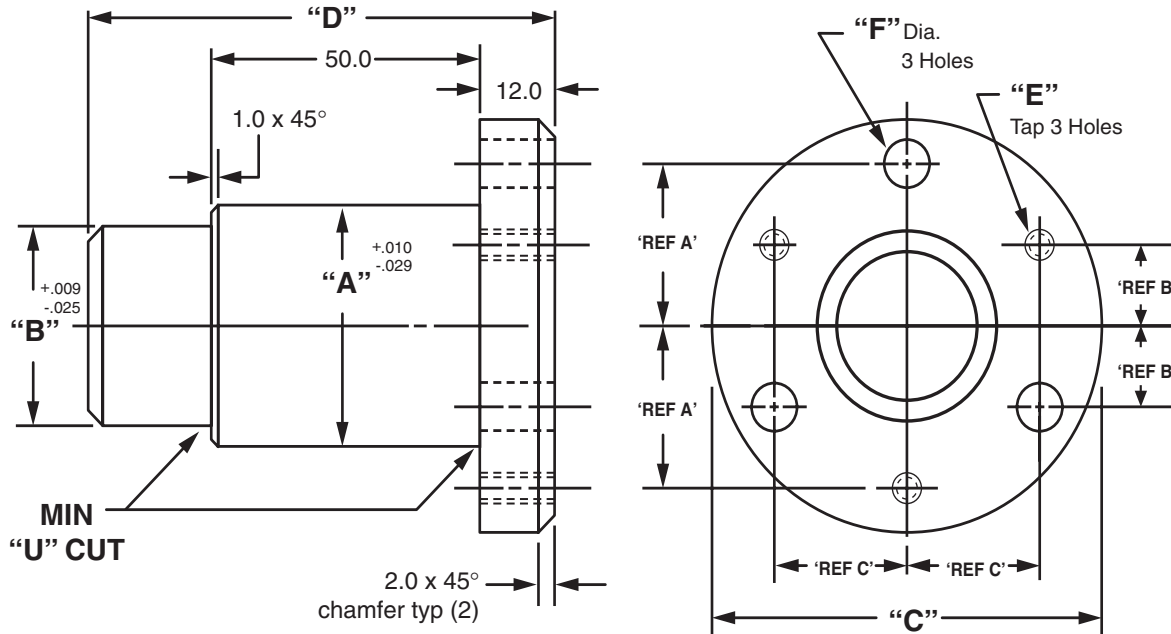


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MASTERLINE STUB SHAFT



	"A"	"B"	"C"	"D"	REF A	REF B	"E"	"F"	REF C
MSS50	65	50	112.0	94.0	44.00	22.00	M12 x 1.75	13.00	38.10

Tolerances: 1 place ± 0.30
2 place ± 0.08

MATERIAL: S.A.E. 1020 H.R.S. Minimum

These parts are compared to NAAMS ADP-501

Note: To order special sizes, not listed above, use the following format:

How To Order:

Masterline Stub Shaft

Style: #MSS - 'A' - 'B' - 'C' - 'D' - "REF A" - "REF B" - "E" - "F" - "REF C"

All Parts Available In Inch And Metric.

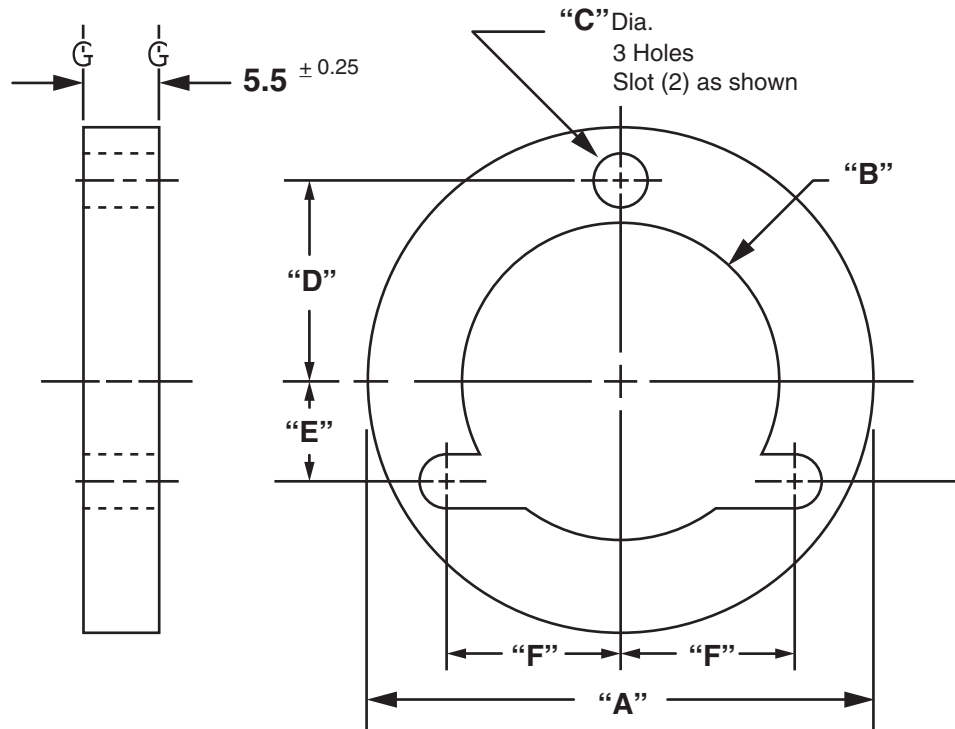


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MASTERLINE STUB SPACER



	"A"	"B"	"C"	"D"	"E"	"F"	Cad File No.
MSS52	114.3	66.0	13.0	44.00	22.00	38.10	MSS52

Tolerances: 1 place ± 0.30
2 place ± 0.08

MATERIAL: H.R.S. Minimum (Note: Other Materials upon request)

These parts are compared to NAAMS ADP-502

Note: To order special sizes, not listed above, use the following format:

How To Order:

Masterline Stub Spacer

Style: #MSS - "A" - "B" - "C" - "D" - "E" - "F" - SP
 Style: #MSS - 114.3 - 66.0 - 13.0 - 44.00 - 22.00 - 38.10 - SP

All Parts Available In Inch And Metric.



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**This is a page reserved for your product.
Talk with us for special ends, key grooves and
other items you might require.**

Thanks,

Masterline[®]